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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,087	02/22/2002	Futoshi Tanigawa	10059-406US (P27064-01)	2369

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2005 MARKET STREET, SUITE 2200  
PHILADELPHIA, PA 19103-7013

EXAMINER

YUAN, DAH WEI D

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/081,087

Applicant(s)

TANIGAWA ET AL.

Examiner

Dah-Wei D. Yuan

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.                      6) ☐ Other:

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**POSITIVE ELECTRODE ACTIVE MATERIAL, FOR ALKALINE STORAGE  
BATTERY, POSITIVE ELECTRODE USING THE SAME AND METHOD OF  
PRODUCING THE SAME**

Examiner: Yuan

S.N. 10/081,087

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September 17, 2003

***Claim Objections***

1. Claim 6 is objected to because of the following informalities. The scope of the limitation “wherein at a point where a cumulative volume accounts for 10% of a total volume...the particle size coordinate...” is not clear. A substitute claim in proper idiomatic English is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi et al. (US 6,358,648 B2).

With respect to claims 1,3,4,6,7, Hayashi et al. teach a nickel electrode active material for alkaline storage batteries comprising nickel hydroxide. Spherical powders, i.e., mean particle circularity is equivalent to 1, of solid solute nickel hydroxide incorporating therein one or two elements selected from the group consisting of cobalt, cadmium, zinc and magnesium are produced. The mean particle size of the resulting powder is reported to be about 10  $\mu$ m in another

similar embodiment. Hayashi et al. further teach that the resulting nickel hydroxide particles have better crystal growth and more homogeneous crystal along certain crystal plane than conventional nickel hydroxide. As a result, the decreases in the number of disordered crystals suggest uniform progress of charge reaction of nickel hydroxide to nickel oxyhydroxide. Thus, the positive electrode active material would invariably comprise nickel oxyhydroxide upon charging the battery. See Abstract, Column 3, Lines 51-67; Column 4, Lines 39-51; Column 6, Lines 39-46. Moreover, it is the position of the examiner that other properties of said material, such as BET surface area, particle size distribution and full width at half maximum of a particular crystallographic orientation, are inherent, given that the positive electrode active material disclosed by Hayashi et al. and the present application having similar chemistry and manufacturing procedures. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. Inherency is not established by probabilities or possibilities. In re Robertson, 49 USPQ2d 1949 (1999). Applicant is advised to submit other information with respect to the Hayashi's positive electrode active material, if it is shown to be patentably distinct from the instant invention.

With respect to claim 2, Hayashi et al. teach the solid solution nickel hydroxide powders are produced by dissolving a sulfate of one or two elements, including cobalt, cadmium, zinc and magnesium, in the nickel sulfate solution. Therefore, the resulting positive electrode active material would have a cobalt compound on a portion of the surface. See Column 6, Lines 37-46.

With respect to claim 5, Hayashi et al. teach the solid solution nickel hydroxide powers are spherical. Therefore, essentially all the powers have a circularity of 1. See Column 6, Lines 37-38.

With respect to claim 8, Hayashi et al. teach the positive electrode active material is first mixed with a cobalt powder, a cobalt hydroxide powder and a zinc oxide powder. Water is then added to the mixture and kneaded to make a paste, which is filled onto a foamed porous nickel substrate. See Column 5, Lines 11-20.

4. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al. (US 6,083,642).

With respect to claims, 1-4,6,7, Kato et al. disclose a positive electrode material for an alkaline storage battery. The active material comprises nickel hydroxide particles and a higher cobalt oxide ( $\gamma$ -cobalt oxyhydroxide). The positive electrode material is prepared by coating the surface of nickel hydroxide particles with the higher cobalt oxide. The nickel hydroxide particles are a solid solution material with one or more metallic element other than nickel, including cobalt, cadmium, and zinc. The solid solution nickel hydroxide particles with the cobalt oxide coating have an average particle diameter of 5 to 20  $\mu\text{m}$  and a BET specific surface area of 5 to 12  $\text{m}^2/\text{g}$ . In one embodiment, an aqueous solution containing nickel sulfate as the main component and cobalt sulfate and zinc sulfate are mixed. An aqueous sodium hydroxide solution is slowly added dropwise while adjusting the pH of the solution with an aqueous ammonia, thereby to deposit spherical solid solution nickel hydroxide particles, i.e., the

circularity of the particles is 1. Also, Kato et al. reveal the presence of nickel oxyhydroxide in the positive electrode active material based on the X-ray diffraction and the spectral calorimeter studies. See Abstract, Column 4, Lines 22-42; 66 to Column 5, Line 5; Column 11, Lines 50-65; Column 6, Lines 39-46; Column 13, Lines 26-45; Column 29, Lines 1-12. Moreover, it is the position of the examiner that other properties of said material, such as particle size distribution and full width at half maximum of a particular crystallographic orientation, are inherent, given that the positive electrode active material disclosed by Kato et al. and the present application having similar chemistry and manufacturing procedures. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. Inherency is not established by probabilities or possibilities. In re Robertson, 49 USPQ2d 1949 (1999). Applicant is advised to submit other information with respect to the Kato's positive electrode active material, if it is shown to be patentably distinct from the instant invention.

With respect to claim 5, Hayashi et al. teach the solid solution nickel hydroxide powers are spherical. Therefore, essentially all the powers have a circularity of 1. See Column 11, Lines 50-65.

With respect to claim 8, Hayashi et al. teach the positive electrode active material is first mixed with a cobalt powder, a cobalt hydroxide powder and a zinc oxide powder. Water is then added to the mixture and kneaded to make a paste, which is filled onto a foamed porous nickel substrate. See Column 11, Line 66 to Column 12, Line 10.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (703) 308-0766. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Dah-Wei D. Yuan  
September 17, 2003

A handwritten signature in black ink, appearing to read 'D. Yuan', with a long horizontal flourish extending to the right.